CLAIMS:

1. An energetic beam markable article comprising:

a first substrate;

a first layer on the first substrate, the first layer comprising:

one or more first areas comprising:

a thermally coalescable material wherein the thermally coalescable material within the one or more first areas is characterized by an average dispersed body size; and

one or more second areas comprising:

the thermally coalescable material, wherein the thermally coalescable material within the one or more second areas is coalesced into bodies characterized by an average dimension that substantially exceeds the average dispersed body size.

2. The energetic beam markable article according to claim 1 wherein:

the average dispersed body size is less than 400 nanometers.

3. The energetic beam markable article according to claim 1 further comprising:

a second substrate covering the first layer, whereby the first layer is sandwiched between the first substrate and the second substrate; and

wherein at least one of the first and second substrates is transparent.

4. The energetic beam markable article according to claim 3 wherein:

the first substrate comprises a first thermoelastic film; and

the second substrate comprises a second thermoelastic film.

5. The energetic beam markable article according to claim 1 wherein:

the first substrate comprises a thermoelastic film.

6. The energetic beam markable article according to claim 5 wherein:

the thermoelastic film comprises a polymer selected from the group consisting of: polycarbonate, poly (ethylene terephthalate), and poly (butylene terephthalate).

7. The energetic beam markable article according to claim 1 wherein the thermally coalescable material comprises particles comprising a polymer.

8. The energetic beam markable article according to claim 2 wherein the thermally coalescable material comprises polymeric particles selected from the group consisting of: poly (methacrylate), poly (vinyl acetate), styrene-butadiene-acrylonitrile copolymers.

9. An energetic beam markable article according to claim 1 wherein:

the first layer further comprises a continuous phase wherein the thermally coalescable material within the one or more first areas is dispersed within the continuous phase.

10. The energetic beam markable article according to claim 1 wherein:

the first layer comprises :

a quantity of solvent;

a quantity of emulsifier, at least a portion of which is in the form of micelles dispersed within the solvent; and

a quantity of polymerization initiator dispersed in the solvent; and

the thermally coalesceable material comprises a quantity of monomer dispersed within the solvent.

11. The energetic beam markable article according to claim 10 wherein the first layer further comprises:

capsules and wherein the quantity of solvent, the quantity of monomer, and the quantity of emulsifier, and the quantity of polymerization initiator are encapsulated within the capsules.

12. The energetic beam markable article according to claim 1 further comprising:

a heat reflecting second layer on the first substrate.

13. The energetic beam markable article according to claim 1 made by a process including exposing one or more shaped areas of the layer to optical radiation to fuse the coalescable material, and form the one or more second areas.

14. An injection molded part comprising:

a bulk of injected molded polymer; and

the energetic beam markable article according to claim 1 fused to the bulk of injected molded polymer.

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15. The injection molded part according to claim 14, wherein:

the energetic beam markable article is fused to the bulk of injected molded polymer in the course of injecting polymer into a mold to form the injection molded part.

16. An energetic beam markable article comprising:

a layer of polymeric particles, wherein the polymeric particles comprise:

a core characterized by a first color; and

a shell characterized by a second color.

17. The energetic beam markable article according to claim 16 further comprising:

a first thermoplastic sheet, and a second thermoplastic sheet wherein the layer of polymeric particles is disposed between the first thermoplastic sheet and the second thermoplastic sheet.

18. The energetic beam markable article according to claim 17 further comprising:

a heat reflecting second layer supported on the first thermoplastic sheet.

19. An energetic beam markable article comprising:

a first substrate;

a first layer on the first substrate, the first layer comprising:

one or more first areas comprising:

a quantity of polymerizable monomer;

a network of first polymer molecules dispersed within the polymerizable monomer, and held together by the polymerizable monomer thereby forming a gel.

20. The energetic beam markable article according to claim 19 wherein:

the quantity of polymerizable monomer comprises one or more monomers selected from the group consisting of methacrylates, vinyl acetate, styrene, butadiene, and acrylonitrilesc.

21. The energetic beam markable article according to claim 19 wherein:

the network of first polymer molecules comprises one or more polymers selected from the group consisting of poly(N-isopropylacrylamide), poly(organotriethoxysilanes), and poly(vinyl alcohol-co-vinyl acetate)/poly(acrylic acid).

22. The energetic beam markable article according to claim 20 further comprising:

a heat reflecting second layer supported on the first substrate.

23. The energetic beam markable article according to claim 19 wherein the layer further comprises:

one or more second areas comprising:

a quantity of the first polymer molecules; and

a quantity of second polymer molecules that are a polymerization product of the polymerizable monomer.

24. The energetic beam markable article according to claim 23 made by a process including exposing one or more shaped areas of the layer to an energetic beam in order to polymerize the polymerizable monomer.

25. A method of making an energetic beam markable article comprising:

dispersing a plurality of bodies of a first heat coalescable material within a second material to form a plural phase material;

coating a substrate with the plural phase material to form a coating of the plural phase material;

patternwise irradiating the coating of the plural phase material.

26. The method according to claim 25 wherein dispersing bodies of the first heat coalescable material within the second material comprises:

forming a suspension of a plurality of polymeric particles in a liquid; and

mixing the liquid and a gel forming polymer to form a gel.

27. The method according to claim 25 wherein:

the plural phase material comprise a gel; and

patternwise irradiating the coating of the plural phase material comprises patternwise heating of the gel above a sol-gel transition temperature of the gel.

28. The method according to claim 25 further comprising:

performing emulsion polymerization to make the plurality of bodies.

29. A method of making an energetic beam markable article comprising:

making a plurality of particle cores that are characterized by a first color;

coating the plurality of particle cores with a coating characterized by a second color; and

forming a layer of the plurality of particle cores with the coating.

30. The method according to claim 29 wherein coating the plurality of particle cores comprises:

electrostatically suspending the plurality of particle cores while spraying the plurality of particle cores with the coating material.

31. The method according to claim 29 wherein coating the plurality of particle cores comprises:

tumbling the plurality of particle cores down a slope while spraying the plurality of particle cores with the coating material.

32. The method according to claim 29 wherein coating the plurality of particle cores comprises:

placing the plurality of particle cores within a liquid that includes the coating material and in which the plurality of particle cores are buoyant;

allowing the plurality of particle cores to rise within the liquid; and

collecting the plurality of particle cores at a surface of the liquid.

33. The method according to claim 29 wherein coating the plurality of particle cores comprises:

placing the plurality of particle cores in a solution of polymerization catalyst to adsorb polymerization catalyst on the cores;

drying the cores to remove excess solvent; and

placing the cores in liquid including monomer to form a polymerized coating on the particles.

34. The method according to claim 29 wherein coating the plurality of particle cores comprises:

dispersing the plurality of particle cores in a colored liquid; and

metering the colored liquid including the plurality of particle cores onto a spinning disk, whereby Taylor instabilities in the colored liquid flowing off the spinning disk form droplets that include the plurality of particle cores coated with the colored liquid.